

Abstract

[0053] A plasma radiation source is improved in such a way that the lifetime of the optics which is limited by the influence of debris is appreciably increased. A gas curtain through which the radiation (5) proceeding from a source region in a vacuum chamber (1) is emitted at a defined solid angle for debris suppression along an axis (X-X) of the mean propagation direction of the radiation (5) exits as a radially directed supersonic gas jet (7) from a propulsion nozzle (2) of a gas jet vacuum pump (3), which propulsion nozzle (2) is arranged on the axis (X-X). The gas curtain is directed to an annular mixing nozzle (8) that is arranged coaxial to the axis (X-X) and is guided out of the vacuum chamber (1) by a diffuser (10). This makes it possible to use source arrangements having an optimal conversion efficiency but extensive debris.